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ABSTRACT

A case study on Birmingham is presented in the first part of this resource unit on regional studies designed for fifth graders. The objective of the sequent occupance unit is to illustrate the impact which the discovery and utilization of a large natural resource, namely, iron ore, can have on the development of a city, in the hope that students will then generalize to other areas and resources. In the latter half of the unit students examine the region of the South as a whole, taking note of different characteristics in different parts of the South, and try to decide what criteria are used to set the South off from other regions of the country. The teacher's guide ED 062 226 provides program descriptions, course objectives, teaching strategies, and an explanation of format. Other related documents are ED 061 134, ED 062 227, and SO 002 732 through SO 002 741. (Several pages may be illegible.) (Author/SJM)

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Grade Five
Unit IV: The South
a. Birmingham Case Study
b. The South as a Region

RESOURCE UNIT

SO 002 732

These materials were developed by the Project Social Studies Center of the University of Minnesota under a special grant from the U.S. Office of Education. (Project No. HS-045)

1967

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OBJECTIVES

This unit should make progress toward developing the following:

GENERALIZATIONS

1. Every place has three types of locations; a position, a site, and a situation.

   a. Location is a position which sets a phenomenon at a speicfic point on the earth's surface usually designated by an abstract grid and described in terms of latitude and longitude.

   b. Site relates a phenomenon to the detailed setting of the area it occupies.

   c. Situation describes a phenomenon in areal relationship with other phenomena with which it is associated.

2. Precipitation is affected by factors such as distance from bodies of warm water, wind direction, temperature, ocean currents, and physical features which force winds to rise.

3. Temperature and seasonal differences are affected in part by distance from the equator; temperature ranges are smaller near the equator than further awa from it.

4. Places in the interior o to have greater extremes than places along the co

5. Nature changes the face through physical and bio

6. Soil in a particular pla by the type of basic roc the climate; vegetation; glaciers, and rivers whi and how man treats the s

   a. Erosion of the soil water and wind; it i areas where grass an removed.

7. Forests can be used to ob other timber products suc turpentine, nuts, etc., d the kinds of trees in the

8. Some things can be produc one place than in another climate, resources, trans routes, access to resourc markets, people's skills

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4. Places in the interior of continents tend to have greater extremes of temperatures than places along the coast.

5. Nature changes the face of the earth through physical and biotic processes.

6. Soil in a particular place is affected by the type of basic rock in the region; the climate; vegetation; erosion; wind, glaciers, and rivers which move soil; and how man treats the soil.

   a. Erosion of the soil results from water and wind; it is more likely in areas where grass and trees have been removed.

7. Forests can be used to obtain lumber and other timber products such as paper, turpentine, nuts, etc., depending upon the kinds of trees in the forest.

8. Some things can be produced better in one place than in another because of climate, resources, transportation routes, access to resources, access to markets, people's skills, etc.

a. Vegetation and what can be grown is affected in part by soil.

b. Differing crops need differing amounts of rainfall and differing temperatures and number of frost free days in order to grow; they need water and dryness at different times during their period of growth.

c. The growth of factories in a town attract people, stores, etc. which in turn make the area more attractive to new factories and also stimulate the growth of old ones.

d. Factories must have some form of power to run machinery.

1) Power for industry is obtained from a number of sources, including water power or steam and electricity produced by burning coal.

e. Costs which must be covered in sales prices if a company is to survive include assembly costs of ingredients, cost of ingredients and labor, and cost of transporting goods to markets.

9. Man uses his physical environment in terms of his cultural values, perceptions and level of technology.

a. The significance of locat upon cultural development in and outside of an area.

1) A change in situation about a corresponding the use of a site.

2) Improved transportati ties make possible wi bigger markets as wel and less costly acces sources.

b. Natural resources are of value until man acquires necessary for their utili or sees a need for using

c. Man changes the character earth.

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a. The significance of location depends upon cultural developments both within and outside of an area.

   1) A change in situation brings about a corresponding change in the use of a site.

   2) Improved transportation facilities make possible wider and bigger markets as well as better and less costly access to resources.

b. Natural resources are of little value until man acquires the skill necessary for their utilization and/or sees a need for using them.

c. Man changes the character of the earth.

   1) The present landscape contains many remnants of the past.

d. Types of agriculture in a region depend upon man's cultural perceptions, and technology as well as upon climate, soils, and topography.

e. A number of factors -- climate, surface features, natural resources, accessibility, and history -- affect settlement patterns.

10. People in most societies of the world depend upon people who live in other communities, regions, and countries for goods and services and for markets for their goods.

    a. Specialization of individuals and regions makes for interdependence.

        1) When a community specializes upon one industry or crop, it is more likely to be affected badly by economic changes within the country as a whole than are those which have diversified their industry.

        2) Diversification of production makes a company or a region less dependent upon price fluctuations for one product or upon the supply of specific resources.

    b. A place needs cheap and rapid transportation in order to carry on much trade with other places.

        1) Towns need means of shipping goods in and out; they are likely to grow up where transportation is good, particularly where different types of transportation meet.

        2) Inland water routes provide dheaper transportation for heavy goods than do railroads, trucks, or planes.

11. A region is an area of
geneous features. The
highly homogeneous, but
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between regions.

    a. Regions are delimit
    ent bases, dependin
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    na, and some on the
    tional relationship

SKILLS

1. Sets up hypotheses.
2. Gains information by st
3. Uses encyclopedias.
4. Uses atlas index to loc
5. Interprets map symbols.
6. Reads distances on maps.
7. Draws inferences from a
different map patterns
area.
8. Applies previously-learn
and generalizations to
9. Tests hypotheses against
10. Generalizes from data.

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11. A region is an area of one or more homogeneous features. The core area is highly homogeneous, but there are transitional zones where boundaries are drawn between regions.

    a. Regions are delimited on many different bases, depending upon the purpose of the study. Some are delimited on the basis of a single phenomenon, some on the basis of multiple phenomena, and some on the basis of functional relationships.

SKILLS

1. Sets up hypotheses.
2. Gains information by studying pictures.
3. Uses encyclopedias.
4. Uses atlas index to locate places.
5. Interprets map symbols.
6. Reads distances on maps.
7. Draws inferences from a comparison of different map patterns of the same area.
8. Applies previously-learned concepts and generalizations to new data.
9. Tests hypotheses against data.
10. Generalizes from data.

OBJECTIVES

G. Every place has three types of location; a position, a site, and a situation.

G. Location is a position which sets a phenomenon at a specific point on the earth's surface, usually designated by an abstract grid and described in terms of latitude and longitude.

S. Uses atlas index to locate places.

S. Applies previously-learned concepts and generalizations to new data.

G. Site relates a phenomenon to the detailed setting of the area it occupies.

S. Sets up hypotheses.

CONTENT

I. We examine the areal location of Birming

A. Birmingham is located in the Southeas portion of the United States at about 33rd parallel North, in the interior continent.

B. Birmingham is located in a humid subt climatic zone; it is not in the main growing zone.

1. It is warm much of the year.

2. It has 50-60 inches of rainfall an

3. Red-yellow lateritic soils have de in this region.

4. Birmingham is outside of the main growing area.

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CONTENT

I. We examine the areal location of Birmingham.

A. Birmingham is located in the Southeastern portion of the United States at about the 33rd parallel North, in the interior of the continent.

B. Birmingham is located in a humid subtropical climatic zone; it is not in the main cotton growing zone.

1. It is warm much of the year.

2. It has 50-60 inches of rainfall annually.

3. Red-yellow lateritic soils have developed in this region.

4. Birmingham is outside of the main cotton-growing area.

TEACHING PROCEDURES

MATERIALS

1. If possible, have your music teacher use some of the songs of Stephen Foster the day before you plan to introduce this unit. As an alternative you might play a record of Stephen Foster's music and have them sing along. After they have been singing about Alabama, Louisiana, and Kentucky, ask your students to point to these states on a large wall map of the United States. Now ask them what part of the United States they are in. Emphasize that Alabama (and Birmingham) are in the South eastern portion of the U.S. When you later call this region "The South" you will need to explain that it was literally the Southern part of the U.S. during Colonial days.

Record of Stephe songs.
Physical-politic the U.S.

2. Have pupils use an atlas index or their student almanac to locate Birmingham's latitude and longitude. Then have pupils locate the city on a physical-political map of the United States.

Atlas
"Student Almanac

Ask: From what you already know about climate and from Birmingham's location, what would you expect to find true about temperatures and rainfall in the Birmingham area? Why? Have pupils check their guesses against temperature and rainfall maps or climatic maps. (Review the use of the legend and symbols used to show temperature and rainfall patterns.)

Temperature map region. Rainfal or region. Or c of U.S. or regio map of U.S. or r tation map of U. Agricultural pro U.S. See also m Borchert and McG phy of the New W amine the many p South.

Ask: What kinds of vegetation might you expect to find in the region? Why? What kinds of soil would you expect to find? Why? What kinds of crops might you find grown in this region? Why? Have pupils check their guesses against soil, vegetation and agricultural products maps. Ask: Does Birmingham lie within the big cotton producing area? Do pupils think Birmingham would be a typical city of the cotton South, with cotton mills as an important industry?

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Temperature map of U.S. or region. Rainfall map of U.S. or region. Or climatic map of U.S. or region. Soils map of U.S. or region. Vegetation map of U.S. or region. Agricultural products maps of U.S. See also maps in Borchert and McGuigan, Geography of the New World to examine the many patterns in the South.

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S. Uses encyclopedias.

C. Birmingham is located in a long, valley running in a North-east, S direction with mountains along ei The original site was the Jones V the metropolitan area has spread the surrounding hills.

D. Birmingham is located at the South the Appalachian Mountain region at the Great Valley.

1. The Appalachians extend all the New York to Alabama.

2. The ridges are formed by the fo layers of material. The plateau lift of these layers and the Pie the result of erosion.

3. Between the Piedmont and the oce coastal plains which have been u ocean at times in our geologic h

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clopedias.

C. Birmingham is located in a long, narrow valley running in a North-east, South-west direction with mountains along either side. The original site was the Jones Valley, but the metropolitan area has spread out over the surrounding hills.

D. Birmingham is located at the Southern tip of the Appalachian Mountain region at the end of the Great Valley.

1. The Appalachians extend all the way from New York to Alabama.

2. The ridges are formed by the folding of layers of material. The plateau is an uplift of these layers and the Piedmont is the result of erosion.

3. Between the Piedmont and the oceans are low coastal plains which have been under the ocean at times in our geologic history.

E. The Appalachian region is rich in oil, coal, and iron ore. The Birmingham area has all the mineral resources needed for making steel.

3. Display a city map of Birmingham. When your students have noticed that it has a North-east South-west orientation, ask them why this might be so. Then have them look at a relief map of the area. Help them visualize the Jones Valley with mountain ridges which run North-west and South-east.

City map of Birmingham. Relief map of U.S. or of Alabama.

4. Project pictures of the valley and ridges and of present-day Birmingham to help pupils understand the physical relief of the area.

5. Generalize about the entire Appalachian range from the direction of the Jones Valley. Point out the physical features associated with this range: the Blue Ridge, the Great Smokey Mts., The Columbia Plateau, The Piedmont, and the associated coastal plains and the Great Valley of which Jones Valley is a part.

   Tell the class about the formation of these features. (If necessary, refer to an elementary geology book for a diagram to use on the chalkboard.)

Relief map of the U.S.

6. It would be helpful at this point to have some student or group of students report on the geologic formation ofsuch minerals as coal, oil, and iron ore. Use an economic map of the U.S. to show how many of these minerals are concentrated in the Appalachian region. (Before pupils prepare reports, it may be wise to review ways of locating information in encyclopedia.)

Encyclopedias. Goode's School Atlas.

S. Applies previously-learned concepts and generalizations to new data.

S. Draws inferences from a comparison of different map patterns of the same area.

S. Sets up hypotheses.

S. Tests hypotheses against data.

G. Some things can be produced better in one place than in another because of climate, resources, transportation routes, access to resources, access to markets, people's skills, etc.

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F. Birmingham has some disadvantages as a steel-making center when compared to Chicago and Pittsburgh.

S. Reads distances on maps.

S. Applies previously-learned concepts and generalizations to new data.

G. Birmingham is located at least 200 miles from the nearest ocean port; therefore highly dependent upon rail transport upon barge traffic on a nearby riv

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G. Birmingham is located at least 200 miles from the nearest ocean port; therefore, it is highly dependent upon rail transportation and upon barge traffic on a nearby river.

7. Have pupils study the materials needed for making steel. Then have them compare U.S. maps which show iron deposits, coal deposits, and limestone deposits. Or have them look at one map of Alabama which slows all of these deposits. Ask: Would it be easy or difficult for Birmingham to become an important steel-manufacturing center? Why?

Tell the class about the self-fluxing qualities of some of the iron in the Birmingham area and about the advantages of dolomite over limestone. Then describe the vast quantities of dolomite in the floor of the valley in which Birmingham is located.

Ask: Given what you already know, how do you think Birmingham's costs of producing steel would compare with costs in Chicago and Pittsburgh? Why? (Ask further questions as needed to bring out distance of transportation for resources.) Have pupils check a table comparing the costs of assembling the resources needed in these three cities. Ask: Does this table support your hypotheses?

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making of stee
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Filmstrip: Bi
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See map used i
Unit.

8. Also ask: Would this easy access to resources necessarily give Birmingham an advantage over Chicago and Pittsburgh as a steel-making center? What other factors must be considered before building steel mills? (Have pupils make suggestions to check later in the unit.)

9. Have pupils study a map to decide what gulf port would be most useful to Birmingham. Then have them find the latitude of Mobile. How many degrees of latitude is it from Birmingham? How far would this be in miles? (3 x 70)

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U.S. Steel Co. kit on the making of steel.
For a single map of coal and iron in state, see Filmstrip: Birmingham, Industrial Center of the South, Eyegate, frame 2.
See map used in Overview Unit.

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S. Applies previously-learned concepts and generalizations to new data.

. Man uses his physical environment in terms of his cultural values, perceptions and level of technology.

G. A number of factors -- climate, surface features, natural resources, accessibility, and history -- affect settlement patterns.

II. We examine the Jones Valley in 1815.

A. It was inhabited by a few Creek I

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2. They showed no hostility to th when he came.

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B. Beginning in 1813, white men bega the valley to farm.

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II. We examine the Jones Valley in 1815.

A. It was inhabited by a few Creek Indians.

1. The Indians lived in the surrounding hills and used the valley for hunting grounds and for annual celebrations with their neighbors the Cherokees and the Choctaws.

2. They showed no hostility to the white man when he came.

3. They used the iron ores to paint their faces.

B. Beginning in 1813, white men began coming into the valley to farm

1. The first group of settlers came about 1813 and included a John Jones for whom the valley was named.

2. Later groups of settlers came from Rutherford County, Tenn., and from South Carolina.

3. The primary purpose for coming to the valley was for farming.

How could people of Birmingham get goods to and from this port? (Note the distance of Birmingham to the nearest river.) How could Birmingham get goods to the river today? Before trucks and railroads were developed? How could they get goods up the river today?

10. Have pupils read about the Indians who used the valley before the coming of the white man. Ask: Why do you think they lived in the hills rather than in the valley itself? (Relate to their ways of living on the land.)

"Selected Readings."

how Indians used the red ore to paint their faces. Ask: Why didn't the Indians use the ores as we do today?

11. Ask your students to try to imagine what your town was like before any white man came. Ask them to describe the area without any signs of white man's culture. Ask them why any white settler might want to come to your area. In most cases you can explain that they came to the local area for the same reason that the settlers first went to the Jones Valley -- in search of productive land where they could raise enough food for their families, and claim some land that they could call their own.

Tell pupils a little about the earliest settlers in the area. Point out that iron was used as early as 1813 to

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Point out that iron was used as early as 1813 to

a. Land was productive. Settlers grew garden crops and a little cotton.

b. The woods were filled with deer and turkey.

c. Many fish could be found in the clear waters of the Warrior and Cahaba rivers.

4. Essentials, such as salt, sugar, coffee, and calico were obtained by taking cotton to the present site of Tuscaloosa.

. People in most societies of the world depend upon people who live in other communities, regions, and countries for goods and services and for markets for their goods.

III. We examine Birmingham as a boom town of 1872.

A. The city of Birmingham was established in 1871; by 1872 the town had grown rapidly.

1. The first lots went on sale June 1, 1871. By April, 1872, there were 400 houses and many stores.

shoe horses by Jackson's soldiers and that a small furnace was built in 1818 near Russellville. Read aloud a description of his furnace. Ask: Why do you think the white men began to make iron when the Indians did not? Why didn't the white men make even more use of the area by building large steel plants?

12. Have pupils read accounts of how these early white settlers used the land. — "Selected Readings on Birmingham."

Have pupils do some "creative writing" based on the facts which they have learned. Let them imagine they are living with their parents in the Jones Valley in 1815. Ask them to describe a trip which they took to the falls of the Black Warrior (at the present site of Tuscaloosa) for supplies. They should let their imagination work, but they should abide by the facts such as the mode of travel at the time, a proper description of the scenery, and the right direction for traveling from Jones Valley to Tuscaloosa.

13. Discuss: How did the white settlers compare with the Indians in their use of the land? How did the settlers get goods which they could not produce in the area? To what extent did they have dealings with other parts of the South? Other parts of the U.S.? Other countries?

14. Have pupils read eye-witness accounts of Birmingham in 1872 and accounts which describe the growth from the time of the first building in the new city in 1871. Also have pupils examine a table showing the growth of Birmingham from 1871 to 1873. Discuss: What do you think might account for such great growth within one year? What might account for changes in the area from 1815? — "Selected Readings on Birmingham."

G. The significance of location depends upon cultural developments both within and outside of an area.

G. Improved transportation facilities make possible wider and bigger markets as well as better and less costly access to resources.

S. Sets up hypotheses.

G. Natural resources are of little value until man acquires the skill necessary for their utilization and/or sees a need for using them.

2. Birmingham in 1872 was very cro
had mud streets and few sanitat
ties.

B. A number of factors brought about
in the area from 1815.

1. Prior to the Civil War a small
Elyton, had developed and had b
stage coach stop.

2. People first realized the impo
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logical survey which was made

3. No one was really interested in
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2. Birmingham in 1872 was very crowded. It had mud streets and few sanitation facilities.

B. A number of factors brought about the changes in the area from 1815.

1. Prior to the Civil War a small town, Elyton, had developed and had become a stage coach stop.

2. People first realized the importance of minerals in the area through a state geological survey which was made in the 1850's.

3. No one was really interested in the mineral until it became necessary to produce steel to make munitions for the Confederacy during the Civil War.

15. Tell pupils about development of the town of Elyton and the stage coach. Ask: How might this development have affected the use of the Jones Valley area?

16. Tell the class about the survey which showed the value of iron ore in the Jones Valley. Ask: Suppose you had lived in the U.S. in the 1850's. How might you have reacted to the news of this survey? (Pupils will probably say that they might wish to go to the area, since they will not realize that there was less demand for steel at that time.) Then ask: Why do you think no town grew up in Birmingham until the 1870's? (Ask further questions as needed to bring out the need for a market for steel before people would build a steel plant.)

Now tell your students about the need for steel which was brought on by the Civil War. Ask: Now that you know iron ore has been found in the Jones Valley and that the need has arisen for this iron ore to be made into steel, what changes would you expect to find in the valley?

G. The significance of location depends upon cultural developments both within and outside of an area.

G. Improved transportation facilities make possible wider and bigger markets as well as better and less costly access to resources.

G. The growth of factories in a town attract people, stores, etc. which in turn make the area more attractive to new factories and also stimulate the growth of old ones.

G. Tests hypotheses against data.

4. The Confederate government hired John Milner to build a railroad from Montgomery to the Jones Valley, but the war was over before the railroad was finished.

5. Under reconstruction many new railroad projects were started. When it became evident that two railroads would cross near Elyton in the heart of the mineral country, some men formed the Elyton Land Company, bought four thousand acres, and laid out a new city they called Birmingham.

List on the chalkboard without comment their suggestions. Hopefully they will include such things as:

More people moving in to work
Houses for them to live in
Stores for them to buy their supplies
New transportation routes into the valley
The construction of steel mills

17. Leave the above list on the board. Now tell the class about the coming of the railroads, the effects of reconstruction, and the establishment of Birmingham. (Some of this will serve as a review of the introductory material to this section of the unit.) Compare the reasons for this development of housing in Birmingham to reasons for starting housing developments in their own area today. (e.g. expectation of demand because of increased population; transportation possible to area). Ask: What things are built besides houses in housing developments which you know about?

18. Have pupils read descriptions of the growth of the town of Birmingham after 1873. Ask: How did these facts compare with the causes which we listed on the board? (Note especially anything appearing on the pupils' list that was not true or substantiated by the facts.)

"Selected Readings on Birmingham."

G. People in most societies of the world depend upon people who live in other communities, regions, and countries for goods and services and for markets for their goods.

G. Specialization of individuals and regions makes for interdependence.

G. Man uses his physical environment in terms of his cultural values, perceptions, and level of technology.

6. Many people came to Birmingham w
thought a steel mill would be bu

C. The next few decades saw uneven but
growth in Birmingham and the surrou

1. Before the first steel mills wer
the panic of 1873 hit the new ci
a cholera epidemic struck the in
Almost half of the population le
the end of that year

2. Soon after the depression, men a
to build steel mills in the Jone
Around each mill were company-ow
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were needed before steel mills c
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6. Many people came to Birmingham when they thought a steel mill would be built.

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C. The next few decades saw uneven but rapid growth in Birmingham and the surrounding area.

1. Before the first steel mills were built, the panic of 1873 hit the new city. Also a cholera epidemic struck the inhabitants. Almost half of the population left before the end of that year.

2. Soon after the depression, men again began to build steel mills in the Jones Valley. Around each mill were company-owned houses and stores. Instead of one continuous city developing, many small communities were built throughout the valley. However, new inventions were needed before steel mills could make cheap steel from local iron ore and coal.

19. Have pupils examine figures which show the growth of population in Birmingham from 1871 to the beginning of 1873 and the end of 1873. Ask: What might have caused such a d· in population? Tell pupils what happened.

"Selected Readings on Birmingham."

20. Ask: If you had had a good deal of money after this period of bad business was over, why might you have been tempted to use it in this area around Birmingham? How would you have used it?

"Selected Readings on Birmingham."

Have pupils study tables which show the great increase in the population and the workers engaged in manufacturing from the 1870's to the 1890's. Have pupils compare the population in 1890 with that of some town in their own state with which they are familiar. Compare the number of workers in manufacturing in 1890 with the number of pupils in the school or population of their own community.

Have pupils examine the list of businesses in and around Birmingham in 1887. Where were many of the steel mills in relationship to Birmingham? What would you expect to have grow up around the mills? Why?

Now have pupils read about the problems of developing successful steel mills in the area.

. People in most societies of the world depend on people who live in other communities for certain goods and services and for markets for their goods.

D. The Birmingham area became much more dependent upon other parts of the South and of the U.S. than it had been in 1815.

Interprets pictures.

V. We examine Birmingham today.

A. Birmingham today is one of the largest industrial cities in the South.

1. By 1960 the population had grown to 340,887.

2. By 1960 the number of employees in manufacturing had grown to 60,450.

. The present landscape contains many remnants of the past.

3. The many little villages had incorporated into the larger city.

Sets up hypotheses.

B. A number of factors have been important in bringing about this growth in Birmingham.

21 Discuss: How would the Birmingham area's contacts with other parts of the South and of the U.S. have changed since 1815? Why? (What would be needed for the growing city? What could the city do with all of the steel it produced?,

22. Project pictures showing Birmingham's steel mills and the city today or in very recent years. Discuss in terms of changes which have obviously taken place since the 1870's.

Filmstrip: Birmingham, Industrial Center of the South, Eyegate.

23. Have pupils examine figures for the present population of Birmingham and the number of workers employed in manufacturing. Compare with population figures for the 1870's and 1890's. Also compare the the population of a large city in the pupils' own state.

"Selected Readings on Birmingham."

24. Have pupils use a fairly detailed map of Birmingham to find the city limits. Then have them look for the many neighborhood clusters within these limits. Point out that these represent the remnants of the mill villages. Show that there are also many of these small villages still outside the city limits.

Map of the metropolitan area of Birmingham.

25. Discuss: What must have happened to bring about this great increase in Birmingham's population since we looked at it in the 1890's? Have pupils list possible factors. Use questions to bring out such things as the invention of the auto and the airplane. How might these inventions have affected Birmingham?

G. The significance of location depends upon cultural developments both within and outside of an area.

G. A change in situation brings about a corresponding change in the use of a site.

G. The significance of location depends upon cultural developments both within and outside of an area.

G. Factories must have some form of power to run machinery.

G. Power for industry is obtained from a number of sources, including water power or steam and electricity produced by burning coal.

26. Point out that during World War II, the U.S. needed much steel for war industries. What effect would this have upon Birmingham? Now tell pupils something about what did happen.

Time, Nov., 25, 1940. pp. 88-89.

27. Show the class figures for increased industrial production in the U.S. as a whole from the 1870's until today. Ask: How might this growth have affected Birmingham? Why?

28. Show the class a film or filmstrip on the TVA. Have them locate some of the big TVA dams on the map. Discuss: How might TVA have affected Birmingham.

9. Help your students look up the word "monopoly." Use some simple illustrations to explain the word. Now explain how U.S. Steel obtained a monopoly in the steel industry in Birmingham. Ask: What might be the advantages and disadvantages of having one company hold a monopoly? Show the class how their different views represent the views of different groups of people -- labor, management, etc.

Dictionary

S. Tests hypotheses against data.

G. Costs which must be covered in sales prices if a company is to survive include assembly costs of ingredients, cost of ingredients and labor, and cost of transporting goods to markets.

G. People in most societies in the world depend on people who live in other communities and outside their own [illegible] goods and services and for markets for their own goods.

Man changes the character of the earth.

G. A place needs cheap and rapid transportation in order to carry on much trade with other places.

G. Inland water routes provide cheaper transportation for heavy goods than do railroads, trucks, or planes.

G. A place needs cheap and rapid transportation in order to carry on much trade with other places.

C. Birmingham is still not as important a steel center as Chicago, Pittsburgh, or Youngstown because it lies too far from the big markets of the north and east.

D. Birmingham has become much more dependent upon other parts of the South, the nation, and the world both for markets, raw materials and finished goods.

30. Now have pupils check their list of hypotheses in activity #24 against what they have found out about changes.

31. Have the class list once again the materials needed to produce steel and the sources of such materials for Birmingham, Pittsburgh, and Chicago. Have them check figures for steel production in these cities. Ask: Can you think of any reason why Birmingham produces less steel? Show pupils a population map of U.S. and ask this question again.

32. Discuss: How dependent do you think Birmingham would be for goods from other parts of the South? the U.S? other parts of the world? Why? Why is it dependent upon other parts of the U.S. and the world? (Bring out need for markets for steel, etc.) Why would it be more dependent upon these places today than in 1815 and 1870?

33 Have pupils locate once more the nearest river which might be used to carry products from Birmingham to the Gulf. How close is it to Birmingham? Now tell pupils something about the way in which this river has been made more useful for transportation purposes and the way in which the government has set rates which help Birmingham producers.

34. Have pupils look at a map to locate once more the port which would serve to bring supplies to Birmingham and ship Birmingham's steel to other parts of the U.S. and abroad. Have pupils examine this map and a railroad map of the U.S. Where would they expect Birmingham to sell most of its steel? Why?

-25-

E. Birmingham's industry has diversif
that it is not as dependent on iro
steel as previously.

G. When a community specializes upon one industry or crop, it is more likely to be affected badly by economic changes within the country as a whole than are those which have diversified their industry.

G. Man uses his physical environment in terms of his cultural values, perceptions, and level of technology.

S. Generalizes from data.

G. Man uses his physical environment in terms of his cultural values, perceptions, and level of technology.

G. The significance of location depends upon cultural developments both within and outside of an area.

V. Conclusion: The changes which have about in Jones Valley have been the different men occupying the valley w ent ideas about the utilization of i resources. Some of these ideas were social and economic conditions withi United States and the world.

E. Birmingham's industry has diversified so that it is not as dependent on iron and steel as previously.

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V. Conclusion: The changes which have been brough about in Jones Valley have been the result of different men occupying the valley with different ideas about the utilization of its natural resources. Some of these ideas were molded by social and economic conditions within the United States and the world.

35. Tell pupils that today Birmingham steel mills buy iron ore from South America, eastern Canada, and Africa. How would it get this ore? (Have pupils trace routes on map.) Why would it want to buy ore when it has grown up around iron ore resources?

36. Use an illustration which will be understood by your students to explain diversification. Ask them which grocer would be hurt the most financially by a sudden frost which killed all the garden vegetables -- one which dealt only in fresh meats and vegetables, or one which carried a full line of groceries.

Read aloud a prediction made in 1919 in The Nation that "There appears to be no way...in which Birmingham can greatly diversify its industry." Then tell pupils the arguments used by the author to justify this statement. Have pupils read a description of the plants built to use formerly waste products. Ask:
Has this prediction proved true? Discuss reasons why Birmingham has been able to diversify its industries.

"Selected Readings on Birmingham."
See Appendix for arguments.

37. Have pupils make a list showing changes in the Birmingham area over time. What physical advantages did the area have for growth? Were the natural resources really of advantage until men saw a use for them? Hold a general discussion to summarize the reasons why people have used this area differently in different periods. Also ask: How has the significance of the location of Birmingham changed over the years?

G. Man uses his physical environment in terms of his cultural values, perceptions, and level of technology.

VI. Birmingham and its immediate environs are part of the larger region of the South. The South is rich in agricultural, forest, and mineral resources; it is an important agricultural region which is industrializing rapidly and which has rapidly growing cities.

G. A region is an area of one or more homogeneous features. The coastal area is highly homogeneous, but there are transitional zones where boundaries are drawn between regions.

A. The South can be divided into the mountain area (including the great valley of the Appalachians) into a piedmont region, and into the coastal plain.

G. Regions are delimited on many different bases, depending upon the purpose of the study. Some are delimited on the basis of a single phenomenon, some on the basis of multiple phenomena, and some on the basis of functional relationships.

S. <u>Sets up hypotheses</u>.

38. Now discuss: What factors might bring changes to Birmingham in the future? (Among other things, discuss possible exhaustion of resources in locality, changes in demand for steel, etc.)

39. Tell the class that they are now going to look at the South as a whole. They should try to decide how typical the Birmingham area is of the South. They should also compare the region with the other regions which they have studied. What criteria separate it from the Midwest and the Northeast? How might the South be broken up into sub-regions? Have pupils examine a map to identify the area included by Borchert and McGuigan in the South.

Borchert and McGuigan, Geography of the New World, p. 185.

40 Have pupils look at a physical map of the South. Ask: What physical differences do you notice in the South? Suppose you wished to regionalize the South on the basis of physical terraine. How would you do so? Ask: What possible influences might these physical characteristics have upon how people use the land?

Borchert and McGuigan, Geography of the New World, pp. 186-187.

G. Types of agriculture in a region depend upon man's cultural perceptions, and technology as well as upon climate, soils, and topography.

G. Differing crops need differing amounts of rainfall and differing temperatures and number of frost free days in order to grow. they need water and dryness at different times during their period of growth.

S. Draws inferences from a comparison of different map patterns of the same area.

G. People in most societies of the world depend upon people who live in other communities, regions, and countries for goods and services and for markets for their goods.

G. Specialization of individuals and regions makes for interdependence.

G. Man changes the character of the earth.

G. Nature changes the face of the earth through physical and biotic processes.

B. The South is an important agric which provides products needed of the country.

1. The South has a long growing

a. The length of season [illegible] ...ical conditions in F the southern portion of L 120-180 days in the Appa region.

b. The South has long been r duction of crops which ne growing season.

2. Erosion and soil exhaustion problems in the South.

a. The problem of erosion is by the South's cultivatio crops.

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B. The South is an important agricultural area which provides products needed in other parts of the country.

1. The South has a long growing season.

a. The length of season [illegible] tropical conditions in Florida and in the southern portion of Louisiana to 120-180 days in the Appalachian Mts. region.

b. The South has long been noted for production of crops which need a long growing season.

2. Erosion and soil exhaustion are major problems in the South.

a. The problem of erosion is aggravated by the Southern cultivation of row crops.

1. Prepare a bulletin board display of some of the main crops grown in the South. Divide the class into groups to find information on the requirements of soil type, length of growing season, and moisture for the different crops.

   Have pupils examine a physical map, a moisture map, a map of growing seasons, and a population map. Ask: Given the information you have gathered about crops, where would you expect to find each of these crops grown? Why? How might the population distribution affect agricultural production? Why? Have pupils check their hypotheses against a map of agricultural production in the South.

   Ask: What other factors affect the choice of crops to be grown in an area? What would happen if many more people in this country were to stop smoking because of the health hazard? What would happen if people decide they prefer other types of cloth than cotton cloth for clothes?

   Encyclopedias. Geography texts.

2. Review the diagram "Spring Travels Northward" which was used in the Overview Unit. Ask: What is the significance of early spring in the South? What does it mean to us in the Midwest?

3. Show pictures of serious erosion in the South. Demonstrate why erosion is especially a problem in this area. Obtain trays of equal size. Place a piece of sod in one and fill the other with black dirt. Place both trays at about a 15 angle and sprinkle both trays with equal amounts of water. What happens? Explain why much of the soil is bare in the

G. Erosion of soil results from water and wind; it is more likely in areas where grass and trees have been removed.

G. Soil is affected by...how man uses the soil.

b. The intensive cultivation of cotton and tobacco has frequently exhausted the soil.

G. Man uses his physical environment in terms of his cultural values, perceptions, and level of technology.

3. Farmers have developed new animal breeds and new seeds to meet the needs of their region; they have also adopted other techniques to reduce their costs.

G. Diversification of production makes a company or a region less dependent upon price fluctuations for one product or upon the supply of specific resources.

4. Farmers have adjusted their crops to markets and have diversified so that they are not so dependent upon one crop.

G. Man uses his physical environment in terms of his cultural values, perceptions, and level of technology.

South because of the stress on planting row crops. Reinforce the idea with pictures of row crops and contour plowing.

44. Show pictures of poor crops growing on exhausted soil. Read aloud a description of the effects of growing the same crop year after year on the same soil if it is a crop which exhausts the soil.

45. Have pupils read and discuss the article, "Does the South Need Cattle That Can Sweat?" (The essence of this article is that the cattlemen could not change their land and climate, but they did develop a strain of cattle which were suited to it.) Ask pupils to think of other instances where a similar adjustment has been made.

46. Have a pupil give an illustrated report on "Modern Methods of Cattle Raising in Texas." Ask: How do these techniques compare with your picture of cattle raising in the past? Why do you think ranchers have adopted them since they require expensive equipment?

Goodwyn and the Editors of Time-Life Books, The South Central States, pp. 85-95.

47. Prepare a chart of samples of the many new synthetic fabrics available. If possible include the year in which each was developed. Ask: What does this indicate about the market for cotton?

Tell the story of why people of Enterprise, Alabama erected a bronze statue of the boll weevil. (NOTE: The boll weevil caused so much destruction to their cotton over a period of years that they switched to other crops and the raising of livestock and now enjoy a more prosperous life.)

S. Generalizes from data.

5. Southern agriculture differs from that in the Midwest in terms of kinds of crops produced. The emphasis is upon non-food crops except for the fruit and vegetables and rice which need longer growing season

G. Forests can be used to obtain lumber and other timber products such as [illegible], etc., depending upon the kinds of trees in the forest.

C. The South [illegible] many forest products.

C. Man uses his physical environment in terms of his cultural values, perceptions, and level of technology.

D. Historical cultural developments help distinguish the South from the Midwest and the Northeast.

G. Man uses his physical environment in terms of his cultural values, perceptions, and level of technology.

E. The South is becoming more urbanized.

1. Cities are often located on important transportation routes.

48. Have pupils make a chart comparing the kinds of agricultural activity in the South with those in the Midwest and Northeast. Discuss reasons for differences.

49. Project the map in Borchert showing the main forested areas of the South. Ask: Why do you think these areas haven't been used heavily for agriculture? Let pupils make guesses based upon what they remember of the physical features of the region. Then show them a physical map once more. What kind of physical features are found in the areas of these forests? Discuss the relationship.

Borchert and McGuigan, Geography of the New World p. 190.

50. Now have a pupil report on the lumbering and related forest industries in the South. Discuss: Why are these forest products so important for the rest of the country?

Geography textbooks.

51. Undoubtedly, pupils have heard a good deal about the Civil War even though they have not studied it. Project a map showing the Confederate States during the Civil War. How did the extent of the Confederacy compare with the area included by Borchert and McGuigan in the South? Why might this Civil War help distinguish the South from the other parts of the country?

52. Plot several service stations on a map of your immediate community. Where are they located? Why have they chosen crossroads locations? Have pupils look at a map and find southern cities which are located at crossroads of main avenues of transportation. Ask: Can you find any examples of cities which are not located in such places? Why do you think they may have developed?

G. Towns need means of shipping goods in and out; they are likely to grow up where transportation is good, particularly where different types of transportation meet.

G. A number of factors -- climate surface features, natural resources, accessibility, and history -- affect settlement patterns.

G. Some things can be produced better in one place than in another because of climate, resources, transportation routes, access to resources, access to markets, people's skills, landforms, etc.

S. Sets up hypotheses.

S. Gains information by studying pictures.

S. Tests hypotheses against data.

G. Some things can be produced better in one place than in another because of climate resources, transportation routes, access to resources, access to markets, people's skills, landforms, etc.

a. The converging of routes of transp
tation spurs the growth of a city.

b. Natural features such as passes
mountains, often encourage the dev
ment of cities.

2. Cities in the South are growing rapid

F. The South is becoming more industrialize

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a. The converging of routes of transportation spurs the growth of a city.

b. Natural features such as passes through mountains, often encourage the development of cities.

2. Cities in the South are growing rapidly.

F. The South is becoming more industrialized.

1. The South has adequate supplies of raw materials needed for industrialization.

53. Divide the class into groups to do research on why each of the following cities developed -- Memphis, New Orleans, Mobile, Richmond, Jacksonville, Dallas, Houston, Miami, and Atlanta. What geographical advantage did each have? Is this advantage still important? How rapidly has the city grown in recent years? Why?

Dederick, et. a
People and Mine
18.
Goodwyn and the
Time-Life Books
Central States.

54. Ask: Given what you know about the agricultural and forest products of the South, what kind of processing industries would you expect to find in the South? Project a map showing some of these industries or a chart showing production of some of these processing industries. Or have pupils read to check hypotheses. Or show photos in Borchert to illustrate. Have pupils study pictures to figure out type of industry.

See Borchert an
Geography of th
for reading mat
(pp. 204-205, 2

the class into groups to do research on why each following cities developed -- Memphis, New Orleans, Richmond, Jacksonville, Dallas, Houston, Miami, anta. What geographical advantage did each have? advantage still important? How rapidly has the own in recent years? Why?	Dederick, et. al., Your People and Mine, chs. 14,16. 18. Goodwyn and the Editors of Time-Life Books, The South Central States.
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S. Draws inferences from a comparison of different map patterns of the same area.

S. Sets up hypotheses.

G. Some things can be produced better in one place than in another because of climate, resources, transportation routes, access to resources, access to markets, people's skills, landforms, etc.

2. Technology is freeing farmers to do other tasks.

3. The South has great potential for water power.

4. Projects such as the TVA furnish cheap sources of power.

G. Improved transportation facilities make possible wider and bigger markets as well as better and less costly access to resources.

5. Its transportation system promotes the development of industry.

55. Project a map showing oil and gas resources in the South. Compare with a map of population density and a map of transportation facilties. What advantages are there for the South in terms of the location of these resources? Where would you expect to find oil refineries? Why are these resources important to the U.S.? Now project a chart showing the amount of oil refined in specific southern states or cities. Or have pupils read about refineries. Also show pictures of such refineries.

Borchert and McG
Geography of the
pp. 219, 117, 22
Goodwyn and the
Time-Life Books,
Central States,

56. Project a map showing other mineral resources in the South. Where are most of them found? Do they seem to provide adequate resources for industry? Given this distribution of minerals, how would you expect Birmingham to rank in industrial production as compared with other Southern cities? Why? Have pupils check their guesses against production figures.

Borchert and McG
Geography of the
pp. 114-115, 193

57. Discuss: What is needed besides raw materials for industrialization? Use questions to bring out the need for laborers and for power. Then ask: What has been happening on farms which might make possible a supply of laborers for industry in the South? What possible sources of power are there in the South besides coal? Quote Borchert on the water power potential. Review what pupils learned earlier about the TVA and its effects on the South.

Borchert and McG
Geography of the
pp. 188-189.

58. Project several maps showing changing transportation facilities in the South. Ask: Why are these changes important for industry?

a map showing oil and gas resources in the South. with a map of population density and a map of rtation facilties. What advantages are there for th in terms of the location of these resources? ould you expect to find oil refineries? Why are esources important to the U.S.? Now project a howing the amount of oil refined in specific n states or cities. Or have pupils read about ies. Also show pictures of such refineries.	Borchert and McGuigan, Geography of the New World, pp. 219, 117, 223, 229. Goodwyn and the Editors of Time-Life Books, The South Central States, pp. 96-117.
a map showing other mineral resources in the Where are most of them found? Do they seem to adequate resources for industry? Given this dis- on of minerals, how would you expect Birmingham in industrial production as compared with other n cities? Why? Have pupils check their guesses production figures.	Borchert and McGuigan, Geography of the New World, pp. 114-115, 193-194, 197.
: What is needed besides raw materials for in- lization? Use questions to bring out the need for s and for power. Then ask: What has been happen- farms which might make possible a supply of labor- industry in the South? What possible sources of re there in the South besides coal? Quote Borchert water power potential. Review what pupils learned about the TVA and its effects on the South.	Borchert and McGuigan, Geography of the New World, pp. 188-189.
several maps showing changing transportation fa- s in the South. Ask: Why are these changes impor- r industry?	

G. The significance of location depends upon cultural developments both within and outside of an area.

6. The increase in per-capita income over the past two decades has furnished a greater market for southern products.

S. Generalizes from data.

G. A region is an area of one or more homogeneous features. The core area is highly homogeneous, but there are transitional zones where boundaries are drawn between different regions.

G. Regions are delimited on many different bases, depending upon the purpose of the study. Some are delimited on the basis of a single phenomenon, some on the basis of multiple phenomena, and some on the basis of functional relationships.

9. Project a chart showing the increase in per capita income in the South over the past decades. Be sure that pupils understand the meaning of per capita income. Relate to what they have learned about averages. Now ask: How would this increase in income affect industry in the South? How would industry affect per capita income?

0. Conduct a review discussion on the rise of industry in the South. Focus attention on change in this area. A good lead-in might be to have the youngsters furnish you with a list of advantages that the South has for development of industry. Have the class separate these advantages into two categories: Those the South has always had, and those that it developed recently. What caused the change?

1. Use the set of 16 pictures which appears in Borchert and McGuigan for reviewing the South. They have worked out an interesting set of exercies to go along with the pictures.

Borchert and McGuigan, Geography of the New World, pp. 242-246.

2. Have pupils add to the chart on regions which they began in the unit on the Midwest. Discuss: What criteria can be used to distinguish the South from other regions you have studied so far? What sub-regions might be identified? What basis would you use in regionalizing the South in this way? (Perhaps have pupils check the class' regionalization of the South with that in Borchert and McGuigan. To what extent do they agree? If they do not agree, what criteria were used by Borchert and McGuigan for regionalization which the class did not use?

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APPENDIX

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From William MacDonald, "Marking Time in Alabama," The Nation, Feb. 10, 1919, pp. 318-319.

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TEACHING THE GEOGRAPHY OF BIRMINGHAM

Edwin L. Groenhoff

The major purpose for the inclusion of a unit on Birmingham in our curriculum is to demonstrate the impact which the discovery and utilization of a major natural resource can have on the development of a large population center. In the case of Birmingham the resource is iron ore, but generalizations can be made to other areas and other resources.

It is important that the relative location of Birmingham be established early in the unit. Point out that it is located withnn the region of the United States generally referred to as the "South." Spend some time discussing the political and economic history of this region as both have a bearing on the development of Birmingham.

Prior to the Civil War, the South was primarily an agricultural region. Its major products were tobacco, rice, cotton, and sugar cane. The more level coastal plains were divided into large plantations utilizing slave labor, but in the more hilly areas tobacco and corn were raised on small family farms. The slavery issue finally led to the division of the Union by the forming of the Confederacy in 1861 by the states of the South. This was followed by the Civil War which ended in victory for the North and the emancipation of the slaves. Following the war there was a period of "Reconstruction" in which the U.S. government attempted to rebuild the South, but the old South with its plantation system could never be completely reconstructed without slavery, so it became imperative that the South turn more and more to an industrial economy.

At the close of the war, the South had very few miles of railroad. The few miles which had been built were almost completely destroyed by the advancing Northern armies. Under reconstruction Northern financial groups began to invest in Southern railraod projects. The state legislatures voted large sums of money for the development of new rail lines. This led to the building of many new miles of railroad lines; however, because of fraud and misuse of funds by the state governments, many millions of dollars were wasted. During the national election of 1872 a series of economic scandals were exposed which finally led to the defeat of many officials who had backed the reconstruction policies. In 1876 the last Northern troops were withdrawn from the South and reconstruction was officially over. For a number of years following this, the flow of Northern cpaital into the South for the purpose of industrialization was virtually stopped and much of the industrialization before 1900 had to be financed by local capital.[1]

Review with your students the physiographic and climatic patterns of the United States which pertain to the South. Talk about the coastal plain,

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[1] William B. Hesseltine, The South in American History (Prentice-Hall, 1947).

the piedmont, and the Appalachian mountains. Use a physical map of the U.S. and point out that Birmingham is located at the extreme Southern tip of this range. It should be mentioned that oil, coal, and iron ore can be found in various sections of the Appalachians. Elementary accounts of how these minerals are formed might also be helpful as part of the introduction. Help pupils see how the climate and soil factors permitted the South to become the great "cotton kingdom."

The oriiinal site of the city was Jones Valley, a long narrow strip of land protected by a mountain range to the Northwest and another to the Southeast. A map of the present city of Birmingham will reveal a general Northeast,Southwest orientation which is a reflection of the physical features of the landscape.

The changes which the development of a natural resource can bring will be demonstrated by first looking at the Jones Valley in 1815 at the time of the first white settlement, then a second look in 1872 during the first boom days under Reconstruction, and finally Birmingham at mid-twentieth century. A comparison at these points in time should show changes in population, industry, local government, and transportation which have resulted from man's occupation and utilization of the site.

I. THE JONES VALLEY IN 1815

Until 1815 the only inhabitants of the present site of Birmingham were a few Indians who lived in the nearby mountains and used the valley as a hunting ground. It was used by the Creeks and also their neighbors the Cherokees and the Choctaws. When the first white men came they found only a few Indians, and these showed no hostility.

The first settlers included a John Jones who left his legacy in the present name of the valley. These first settlers were followed shortly by a party from Rutherford County, Tennessee, and another from South Carolina.

These new inhabitants found no difficulty in providing food for their families. The land was productive and the woods on both sides of the valley were filled with deer and turkeys. Some panthers, bears, and many rattlesnakes were also reported in the area. Cattle and horses were raised in the wooded areas and a little cotton was grown in the openings. When it was necessary to get supplies from outside of the valley the settlers would take their cotton to the present site of Tuscaloosa and exchange it for salt, sugar, coffee, and calico.

These early pioneers talked of the beautiful clear waters of the Warrior and Cahaba Rivers, claiming they were clear enough to see fish in ten feet of water. The following quotation will help visualize this fisherman's paradise:

> The fisherman in his canoe, dug out of a poplar tree, with gig in hand and his rifle lying beside him, ready for a deer if he should venture in sight, with the muscadine vines hanging in festoons from the tops of the tall trees that overhung the water with their clusters of black, delicious fruit, and the beautiful redhorse fish sporting beneath his canoe, with their silver sides and red fins and tails, in the most desirable and healthful climate in the United States, the thirty-third degree of North latitude, almost entirely free from cyclones and northers....[2]

The writer of the above lines also tells of wearing buckskin leggins which reached from the ankles to the hips and were fastened with brass buttons on each side. There alse are descriptions of community-wide meetings on Saturdays to play a game called "fives" which was "much more manly and interesting" than baseball.

No one could realize at this time that the surrounding mountains and valleys contained great stores of hematite ore and bituminous coal, and that someday the valley would be filled with thousands of people and the air filled with the smoke of blast furnaces.

II. BIRMINGHAM -- A BOOM TOWN OF 1872

As more settlers drifted into the Jones Valley, a small town named Elyton developed and became a stage stop during the years prior to the Civil War. By the end of the War, Elyton was still essentially a farm village.

The public became widely aware of mineral resources in the valley through a state geological survey mdde in the 1850's by Professor Michael Tuomey, a professor of Geology at the University of Alabama and State Geologist.[3] Few people were interested in this mineral resource until it became necessary to find steel for munitions during the war. The Confederacy granted a subsidy to an Alabama engineer, John Milner, to build a railway from Montgomery to the site of this mineral.[4] An iron works was set up at Selma to make munitions; however, before the railroad was completed, the Confederacy fell and the war was over.

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[2] Jefferson County and Birmingham, Alabama, Historical and Biographical, 1887. (Teeple and Smith Publishers), p. 59. This book of 595 pages contains many accounts of the early history and geography of Jefferson County and Jones Valley. A copy is located in the Minnesota Historical Society Library.

[3] Mary Powell Crane, The Life of James R. Powell (Braunworth and Company, Inc., Brooklyn, New York, 1930), p. 228.

[4] George Leighton, America's Growing Pains, (Harper, New York, 1939), p. 108.

Following the war, Milner with financial help from the reconstruction government began again to push his railroad to the North. At the same time another railway was being built across Alabama to Chattanooga, Tennessee. When it became evidenc that these two railraods would cross in the heart of the mineral country near the town of Elyton, a number of enterprising men formed the Elyton Land Company.[5] This company purchased four thousand acres near the junction, laid out a city, and started to sell lots. The first lots were sold even before the railroads were completed. The first lots went on sale June 1, 1871. Birmingham grew rapidly. Within a year there were some twelve hundred people living in the town. Accounts tell of crowded boarding houses where one set of guests was pulled out early in the morning that others who had been aaiting all night for a bed might get some sleep. They also tell of mud streets, board sidewalks, and a lack of good drinking water.[6]

By 1872 the railroads were there, the mineral had been discovered, the people had come by the hundreds, a fairly impressive town had been built, but as yet no major iron and steel mill had been bullt. In fact, it was to be several years before the first one would be built because the new city had hardly begun when the panic of 1873 hit the country and the promised financial backing for the mills did not materialize. Early in 1873 the population of the city wss estimated at 4,000, but by the end of the year, this had dropped to less than 2,000.[7]

With the revival of business after the crash, and aided by the publicity of Birmingham promoters, capital again began to come into the area. One industrialist, Henry Debardenleben, set up a mill and a whole town by buying a number of buildings from the New Orleans Cotton Exposition and erecting them on a site he called Bessemer.[8] Company towns sprang up throughout the valley. Each was composed of some shacks thrown together, a commissary, and a mill. Cheap labor was available from the Alabama farms and the needed minerals were all within a few miles of the mills. Under conditions like these the production of iron ore began in earnest.

The rise in number of employees in manufacturing as recorded by the U.S. Census during these formative years shows a phenomenal growth. The following figures are for all of Jefferson County in which Birmingham is located:

1860	6 employees
1870	44 employees
1880	301 employees
1890	3,247 employees

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[5] The articles of incorporation can be found in The Life of James R. Powell, op. cit., p.233.

[6] John R. Hornady, The Book of Birmingham (Dodd, Mead, 1921), p.12. This book contains many eye-witness accounts of the early days. A copy of the book is found in the Minnesota Historical Society library.

[7] Mary Powell Crane, The Life of James R. Powell, op.cit., p.261.

[8] Leighton, op. cit., p.113.

The population had a corresponding rise from an estimated 2,000 at the end of 1873 to 3,086 in 1880, and to 26,179 in 1890.

You will need to help your students understand how a depression affects the whole economy of a nation. Some of us forget that our pupils have never experienced a major financial recession. The interdependency of our nation's economy can be illustreted through a study of the effect of the panic of 1873 and also the depression of the 1930's on the economic growth of Birmingham.

III. BIRMINGHAM AT MID-TWENTIETH CENTURY

By the middle of the twentieth century our little boomtown had grown to a population of 340,887 with almost twice that many in the standard metropolitan area. Along with the population growth there was a corresponding growth of industry. Birmingham had become the leading industrial city of the South. Value added by manufacturing was only $18,000 in 1870, but by 1958 this had risen to $587,027,000. During the same period the number of employees had risen from 44 to 60,450.

The population of Alabama had become increasingly concentrated in urban centers. Jefferson county, while containing only two percent of the land area of the state, contains one-sixth of the population.[9]

In the development of the city two types of consolidation have taken place. The first has been a consolidation within the steel industry. As early as 1907 the United States Steel Corporation purchased the Tennessee Company and gained a monopoly in the iron and steel industry of Birmingham. U.S.Steel still owns the largest mills and retains almost complete monopoly. It is difficult to get figures on the steel industry of Birmingham from the U.S.Census because it does not list value added in an industry which is controlled by one company.

The second consolidation has been political in nature. We have already pointed out that little settlements developed rround the steel mills with their company owned houses and company stores. Gradually it became necessary to incorporate these many little villages into the larger city.[10] It is possible to pick out some of these settlements on the present day map of Birmingham.[11] If you have available a fairly detailed map of Birmingham, it would be interesting to locate some of these neighborhood centers.

It may be too sophisticated for a fifth grade class, but you might try to point out that the more dependent a city is on one major industry, the harder it is usually hit by a depression. This is especially true when that one industry is basic to the nation's economy. When the depression of the

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[9] Wildon Cooper , Metropolitan County, A Survey of Government in the Birmingham area. (Bureau of Public Administration, University of Alabama, 1949), p.1.

[10] Ibid., p.5.

[11] See Stuart Queen and Lewis Thomas, The City (McGraw-Hill, New York, 193 p.78.

1930's came, Birmingham was still highly dependent upon the steel industry. The result of the financial crash could still be seen in 1939 when the number of employees and value added in manufacturing were both lower than ten years earlier in 1929. At the height of the depression about one-third of the city's population was on relief.[12]

Today's Birmingham has a much more diversified economy, but her key industry still remains iron and steel. It is the only iron and steel district in the United States which contains all three raw materials for iron-making within a few miles.[13] On the East is the Hematite ore -- some of it self-fluxing. On the West is coaking coal, and in the valley bottom is the limestone. Even with this advantage in assembly costs, Birmingham has never rivaled either Pittsburg or Chicago in steel making. One reason is the expense involved in marketing the pig iron and steel in the North. Until Southern industry grows to the place where it can absorb the products of Birmingham this rate disadvantage will continue. Some have suggested that since Birminham steel is controlled by U.S. Steel, a Northern company, the rates are kept purposely high to help the Northern mills.

Although Birmingham and the entire South have made great strides toward industrialization, it still lags behind many other parts of the United States. At mid-century the total value added by manufacturing in the U.S. (in millions of dollars) was $117,212. Of this amount $30,403 was from New York, New Jersey and Pennsylvania. At the same time the industrial output of Kentucky, Tennessee, Alabama and Mississippi was $4,702. The total output for the state of New York alone was $14,141 (still millions of dollars) while that for Alabama was $1,319.

Some generalizations which may be made from a study of Birmingham are:

1. It is only after a natural resource has been discovered, transportation lines built to it, and financial backing obtained for its development that this natural resource becomes a major factor in change in the use of site.

2. When the economic base of a community is to be found in one major resource such as iron ore, it is most susceptible to changes in the economic conditions of the entire nation.

3. Even after a number of small communities have been brought together under one metropolitan government, it is possible to locate on the landscape the several small communities.

4. Production costs of major metals are directly related to the assembly costs of the ingredients. The final costs to the manufacturer involves assembly costs of the original materials, plus labor and transportation costs.

Since the study of Birmingham involves some highly sophisticated concepts, it is recommended that the teacher availa himself of a good economic geography

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[12] Leighton, op. cit., p.132.

[13] C.Langdon White and Edwin J. Foscue, Regional Geography of Anglo-America (Prentice-Hall, Englewood Cliffs, 1954), p. 151.